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Coordination of the policies and activities of the specialized agencies and other bodies of the United Nations system related to the following theme: the role of the United Nations in promoting development, particularly with respect to access to and transfer of knowledge and technology, especially information and communication technologies, inter alia, through partnerships with relevant stakeholders, including the private sector

Economic and environmental questions: public administration and development

Letter dated 20 July 2001 from the Permanent Representative of China to the United Nations addressed to the Secretary-General

I have the honour to transmit herewith the findings and recommendations of: the International Symposium on Network Economy and Economic Governance, held in Beijing from 19 to 20 April 2001; the International Symposium on Government and E-Commerce Development, held in Ningbo on 23 and 24 April 2001; and the second High-Level Forum on City Informatization in the Asia-Pacific Region, held in Shanghai from 24 to 26 May 2001 (see annex).

I should be grateful if you would have the present letter and its annex circulated as a document of the fifty-sixth session of the General Assembly, under item 12 "Report of the Economic and Social Council" of the provisional agenda (A/56/150), and of the Economic and Social Council, under items 4 "Coordination of the policies and activities of the specialized agencies and other bodies of the United Nations system related to the following theme: the role of the United Nations in promoting development, particularly with respect to access to and transfer of knowledge and technology, especially information and communication technologies,

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inter alia, through partnerships with relevant stakeholders, including the private sector" and 13 (k) "Economic and environmental questions: public administration and development" of the agenda for the substantive session of 2001.

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Annex to the letter dated 20 July 2001 from the People's Republic of China to the United Nations addressed to the Secretary-General

Public administration, information technology and development: report on three conferences conducted in China

In response to the United Nations Millennium Declaration and the Economic and Social Council 2000 Ministerial Declaration, the Chinese Government, in collaboration with the United Nations Department of Economic and Social Affairs, Division for Public Economics and Public Administration, conducted three important conferences in the first half of 2001 to assist developing countries and countries with economies in transition in improving national capacities for taking advantage of the information and communications technology (ICT) revolution and in integrating into the global knowledge-based economy. These three conferences were:

1. International Symposium on Network Economy and Economic Governance, 19-20 April 2001, Beijing, China;
2. International Symposium on Government and E-Commerce Development, 23-24 April 2001, Ningbo, China;
3. Second High-Level Forum on City Informatization in the Asia-Pacific Region, 24-26 May 2001, Shanghai, China.

Mr. Kofi Annan, Secretary-General of the United Nations, delivered his messages to all the three conferences, and the President of the Economic and Social Council, Mr. M. Martin Belinga-Eboutou, attended and made keynote addresses at the three conferences. The observations, findings and recommendations from the three conferences are as follows.

I. Observations

International Symposium on Network Economy and Economic Governance

This symposium was co-sponsored by the State Development Planning Commission, the Ministry of Finance, the Ministry of Information Industry, the State Statistics Bureau of the Chinese Government, the People's Bank of China and the Beijing Municipal People's Government. As the first international conference addressing this important topic, the Symposium attracted more than 300 participants from 36 countries, including a large number of ministers and high-ranking government officers. Senior representatives from the Department of Economic and Social Affairs of the United Nations, the World Bank, the International Monetary Fund (IMF), the United Nations Conference on Trade and Development (UNCTAD), and the European Union attended the Symposium.

Within the overall context of national institution building, the Symposium sought to foster awareness in developing countries and countries with economies in transition of the advanced state of the network economy and the related issues of economic governance. For this purpose, this Symposium served to deepen understanding of: development and trends of the network economy and its impact on national and global economic governance regimes; the challenges and opportunities

that the new network economy offers to developing countries and countries with economies in transition; and the role of government in guiding the transition period from an old economy to a network economy. The ultimate objective of the Symposium was to help developing countries and countries with economies in transition to seize opportunities and participate in the benefits promised by the network economy.

The Symposium focused on the following five themes: (1) Network economy and economic globalization; (2) Network economy and development; (3) Network economy and structural change; (4) National economic governance; and (5) Global economic governance. Five international resource persons were invited to address the five themes.

International Symposium on Government and E-Commerce Development

This Symposium was co-sponsored by the Ningbo Municipal People's Government, the Chinese Academy of Sciences, the Chinese Academy of Engineering, the Ministry of Information Industry of China and the Zhejiang University of China. More than 280 participants from 39 countries, including a large number of ministers and high-ranking government officers, participated in this Symposium. Senior representatives from the Department of Economic and Social Affairs, IMF, UNCTAD and the European Union attended.

It is well known that e-commerce promises to promote and expand global trade, however, the process is not automatic. It requires concerted effort to develop an appropriate environment, one with all the necessary human and institutional capabilities, in developing countries and in countries with economies in transition. These countries need to design national policies and a strategic framework to guide the development of e-commerce. National and local governments, in cooperation with the private sector and civil society, have a key role to play in this process. In view of this, this Symposium aimed at providing a forum for policy makers from both the developed and the developing world to share their views on the role of government in developing e-commerce.

This Symposium focused on the following four themes: (1) Trends in development of e-commerce; (2) Strategies for the development of e-commerce in developing countries and in countries with economies in transition; (3) Administrative and legal aspects of e-commerce; and (4) A case study on the development of e-commerce in the city of Ningbo, China. Four international resource persons were invited to address the four themes.

Second High-Level Forum on City Informatization in the Asia-Pacific Region

The annual event on City Informatization in the Asia-Pacific Region, co-sponsored by the Shanghai Municipal People's Government, the Ministry of Information Industry of China and the Chinese Academy of Sciences, under the auspices of the United Nations Development Programme (UNDP), aimed at promoting the development of city informatization in the Asia-Pacific region by stimulating regional and inter-country cooperation, particularly South-South cooperation, in both the state and corporate sector, to ease the digital divide and the knowledge economy gap between developed and developing cities in this region. The first CIAPR Forum (CIAPR I) was held in June 2000, in Shanghai. Since then, the CIAPR Forum has become a premier gathering of mayors, policy and decision

makers, experts, the private sector and ICT business leaders in the Asia-Pacific region. It is the only event focusing exclusively on municipal-level information and communications technologies and the related local-to-global knowledge economy.

Based on the effectiveness, outcomes and visibility produced through CIAPR I, high-level interest and interaction had already been generated for the second CIAPR Forum (CIAPR II). More than 800 leaders of municipal governments, the ICT business sector and non-governmental organizations and experts worldwide participated in CIAPR II, held from 24 to 26 May 2001 in Shanghai, including the Minister of Communications and Information Technology of Singapore, the Minister of Public Administration of Italy, senior Vice-Presidents from Hewlett-Packard, Cisco Systems and Oracle Corporation and representatives of the Department of Economic and Social Affairs, UNDP, the United Nations Industrial Organization (UNIDO), UNCTAD and the United Nations University.

The agenda of CIAPR II was focused on "Solutions and Best Practices in City Informatization", and presented and debated, through the Chief Executive Officers' Forum and Mayors' Forum, options on the practical applications of developing and utilizing city information infrastructure and the knowledge industry and the governance systems, including management, legislative and institutional frameworks necessary to make it work. A number of special sessions were also organized to provide the substantive experiences of particular countries and cities in special events, such as Singapore Day, Hong Kong Day, Shanghai Day, E-Government Day, the Mayors' Round table and South-South Cooperation Day.

II. Findings

1. The majority of the participating Governments have attached great importance to the impact of ICT on development. While recognizing that the creation of new ICTs and the emergence of the network economy have presented developing countries with new opportunities for development, many representatives from different Governments indicated that there still existed two extreme scenarios: one positive and one negative. The first scenario is that the network economy could provide the developing countries with a new channel for growth. In this scenario, information technology will allow developing countries to bridge the gap that exists between them and the developed countries and enable them to compete on an equal footing in global markets. The alternative scenario is that information technology will enable faster growth in the developed world, while developing countries will lag behind. If so, the current "digital divide" will create the basis of greater divergence in economic outcomes, both between the developed and the developing world and also within developing countries.

In order to improve the likelihood of the positive outcome, developing countries need to deepen their understanding of the new knowledge-based economy, carefully design their institutional and policy framework and develop appropriate strategies for taking advantage of it. In the meantime, it is critical to build an international framework to stimulate effective international cooperation, particularly South-South cooperation, to bridge the digital divide and promote digital opportunity and to adopt a coherent system-wide ICT strategy to enhance the development impact of ICT in all the countries.

2. The impact of technological revolution, including the current ICT revolution, on economic and social development of any State relies on a very particular combination of many crucial ingredients. Technology certainly plays an important role in this regard, but technology alone is not enough to bring dramatic changes to society. For example, investment is important and necessary as well. Furthermore, the crucial ingredients also include the right balance of skills, the right institutions and positive modes of governance and, above all, entrepreneurial spirit. Some experts describe these ingredients as "social capital". While technologies can be copied or acquired at some cost whenever the capital is available, social capital is much harder, often impossible, to replicate; and usually takes a long time to develop. Hence, improvement of the development impact of ICT must be accompanied by national capacity-building, including imperative economic and social reforms and the development of good governance.

In addition, Governments should ensure that investment in information and communication technology is accompanied by investment in social capital. At the same time, they must choose policies that recognize the network characteristics of the new economy and use these to their advantage.

3. The experts participating in these conferences indicated that the possibility that the network economy and e-commerce could increase the gap between rich and poor countries could become a reality in two ways. One is that resource constraints prevent poor countries from acquiring access to today's information and communications technology, creating a digital divide, and this digital gap leads to a further economic gap. The second is that developing countries invest many scarce resources from other uses to close the digital gap, yet cannot catch up in economic terms. This second way can arise if developing countries lack the social capital to take advantage of these new technologies. From the developing countries' point of view, this second outcome is the worst of all possibilities.

Therefore, government leaders of developing countries must recognize that, even though the paradigm of a knowledge-based economy is increasingly applicable to developing countries, moving to a knowledge-based economy is not a feasible or meaningful prospect for all countries, especially in the near future. While appreciating potential opportunities for using ICT in their own countries, national Governments must also have a keen awareness of the constraints and pitfalls in the use of ICT.

4. Many Government representatives, on the basis of their own experience, shared the view that to avoid the pitfalls and to maximize the chances of success, developing countries must not blindly copy the technology leaders. The winner-takes-all characteristic of the new network economy suggests that copying the good practices of the successful countries will not always work. Sometimes developing countries may be able to close the digital gap by means of copying, but as long as there is a gap, rich countries may capture most of the benefits. For example, the uses of the Internet differ among countries at various stages in the development process. In developed economies, the Internet may provide a channel for electronic commerce. For many developing countries, however, this may not be the case simply because of the lack of necessary financial structure (e.g., credit cards) and the limited access to the Internet. Therefore, developing countries should not try to replicate what has been done or is being done in the developed world, as it will only use up precious resources without much success. No single blueprint will work for

all developing countries. The readiness with which societies embrace the new knowledge-based economy will depend on individual attitudes and risk perceptions, cultural mores, social conventions and the flexibility of existing institutions. Each society will have to adapt this blueprint to its own specifications.

Developing countries should analyse their own problems and identify the opportunities provided by the modern ICT to solve these problems. Developing countries should also identify the major constraints of their own country and examine whether new technologies can solve these in a fundamental way. For instance, if labour markets work imperfectly, electronic labour exchanges may help; if commodity markets do not work well, electronic clearing houses could help. Likewise, there are many possibilities in the areas of international trading, materials planning, distribution, supply chains and communications.

5. To catch up with the new network and knowledge-based economy and bridge the digital divide is not simply an issue of putting more investment into the information infrastructure nor of making the Internet accessible to everyone. For the vast majority of the people in developing countries and for the people on the margins of subsistence, the priorities are still water, food, health and energy. As yet, the Internet does not deliver these directly. The dangerous possibility is that enthusiasm about the Internet could divert resources from meeting the basic needs of the poor, while the ICT investment does not benefit the poor at all.

On the other hand, however, meeting the basic needs of the poor, such as water, food, health and energy, is not necessarily opposite to bridging the digital divide. What Governments should do is to identify the new development opportunities provided by the ICT revolution and, on the basis of the situation of their own country, enunciate their own vision and develop a new set of strategies for their economic and social development. Among these actions, the key is to identify the opportunities specific to their own country. Under the new environment of the global ICT revolution, these strategies must be different from those in the industrial age so that the traditional problems such as water, food, health, and energy will be more effectively addressed in different ways.

6. There are three major areas in which the applications of ICT are being developed in today's world: e-commerce, e-government and e-society. These three areas of ICT applications represent the most critical aspects that the economic and social development of any country can benefit from at the current stage. Experts and participants agree that three essentials are required for any country to develop ICT applications in the three critical areas. These essentials are: (a) physical and economic access to the Internet, that is, telecommunications infrastructure and networks with an affordable price structure for potential users; (b) proper knowledge and experiences should be shared among all the potential users; that is, technical know-how; and (c) legal and regulatory frameworks that ensure security and confidentiality of all the transactions online, that is, protection of business companies and consumers. Any developing country that wants to develop e-commerce, e-government and e-society must make efforts to establish these three essentials. As far as technical cooperation and international assistance are concerned, the urgent needs of developing countries include all the three essentials. Substantive steps to improve the information and communications infrastructure must be taken, such as expanding telecommunications to remote and rural areas, bringing cellular network coverage to all the corners of the world, using digital

satellite broadcasting services to provide high-speed downlink, exploiting much wider broadcasting of radio and television, and so forth.

III. Recommendations

1. **Invest in education**. Investing in education is valuable in any economy, at almost any level of development, and desirable for its own sake, but education in the knowledge-based economy is a particularly critical advantage. Success in such a world will rely heavily on access to human capital and ownership of intellectual property. Therefore, Governments should also invest heavily in primary and secondary education and in basic sciences at the higher levels. At the same time, they should encourage and facilitate private sector involvement in specific training.

While investing in education, Governments must realize that the traditional education systems, which were designed to meet the needs of the industrial society, are no longer meeting the needs of the information age. The worldwide shortage of skilled ICT personnel at all levels and in all countries has proven this decisively. Hence, great attention should be paid to the reform of the existing education systems in order to make them adaptive to the requirements of the coming information age. A proper ICT education must begin from primary and secondary school levels. The education reform should also include improving skills in languages that are most frequently used on the Internet, so that the information available can be translated into the knowledge required for profitable businesses and be harnessed for local economic and social development; if windows to the world are opened by means of the Internet, more business opportunities may be created for local populations.

2. **Create a demand for new technology from government**. In many developing countries, government, including non-governmental organizations and international agencies operating in these countries, can play a useful role in boosting demand for knowledge products and information goods. In many countries, government is the major agency for social change and interacts with people through various channels. As a matter of fact, government is the largest user of ICT in many developed and developing countries. Public agencies in these countries can help by becoming consumers and producers of knowledge products. One simple way to do this is to introduce information technology within government departments and develop the Internet as a portal of communications with the public, for instance, to develop e-government based on each country's situation and urgent needs. These interventions could trigger a positive cycle, and also help circumvent the linguistic and cultural barriers that contribute to the digital divide. Government bureaucracies are often held back by resource constraints and inefficiencies. By using information technology, government businesses may become more effective and efficient, better public services may be delivered to the citizen and new partnerships between government, enterprises and citizens may be established. The crucial fact is that e-government will not only lead the government as a major user of information technology, but will also boost demand for new technology in the country. This in turn will create further demand for related products and will influence the ways and speed with which the private sector adopts ICT.

3. **Boost the supply of new technology by investing in infrastructure**. Experts and government officers pointed out that there were more fundamental requirements, among them connectivity, for the network economy and e-commerce.

At present, the information superhighway is a toll road, and a vast majority of the world's population cannot afford the computers needed to access the Internet. Creating electronic channels for government activities will be useless if people cannot access these channels. On the supply side, Governments should invest in the telecommunications infrastructure, especially if private investors are not willing or able to do so. In general, public investment in the information infrastructure will catalyse and attract private investment in products that take advantage of the infrastructure. Of course, in some areas, the private sector itself may be willing to invest. For instance, in many countries, mobile and wireless telephones have been rapidly developed through private investment. Governments can encourage this trend by providing long-term licences at prices that are reasonable. Sometimes, encouraging investment by the private sector will involve dismantling existing state monopolies and loss of existing revenue streams, but the long-term gains will outweigh these losses.

4. **Encourage domestic production of content and knowledge products and services, and encourage individual creativity**. For any country, these will always be a foundation for a country to have a competitive advantage in the future. Local content development, knowledge products and services are the key to attract and tie local people to the Internet and, accordingly, to promote the popularization of the Internet. In fact, many applications being developed to benefit citizens, such as digital libraries, electronic museums, distance education and training, distance medical services and other public social services, must be based on the development of local content industry. In addition, a large number of public information systems such as local news and weather, entertainment, tourism, maps and sports are developed based on local content and will stimulate the development of the domestic information services industry and raise the living standard of the local people.

There are possibilities, such as in software and content industries, for developing countries to specialize in the production of knowledge goods on the global market. To compete in this market, developing countries need not only a well-educated and skilled workforce but also to create incentives for individuals to innovate. Some developing countries have successfully created venture capitals and innovative incubation systems for local ICT industry development. A Government's support for research and development at the higher levels is also important for stimulating the production of knowledge goods.

5. **Encourage greater and more extensive cooperation and coordination among developing countries**. It has been recognized that successful practices and experiences from developing countries are usually directly helpful and enlightening to other developing countries. In this regard, multiplying occasions for best practices-sharing and mutual learning among developing countries on issues of ICT for development are significant for deepening the understanding of the potential and implication of ICT to development and for sharing the outcomes as extensively as possible. Creating various web sites for comparing the initiatives, practices and experiences in e-government, e-commerce and e-society and for establishing specified portals to provide advice and training for different ICT applications to both developed and developing countries are also helpful and meaningful.

Many small developing countries lack the resources to build their own information infrastructure, e-commerce facilities and/or benefit from economies of

scale. They may coordinate their actions and investments in promoting the network economy and e-commerce development through joint efforts. In the past, coordination and cooperation required geographic proximity and therefore led to regional groupings of countries. The new network economy reduces geographical barriers so that societies that are close to each other in terms of their level of development (say, GDP per capita, or state of educational development) can team up to address issues of common concern.

International cooperation and coordination for ICT development can provide global leadership in bridging the digital divide, promoting digital opportunity and adopting a coherent system-wide ICT strategy to enhance the development impact of ICT. It can also promote synergies and coherence of all efforts directed to expand the development impact of ICT, including supporting, through providing technical assistance, national actions aimed at: (a) enunciating a national vision; (b) developing national policies; (c) establishing national priorities and strategies; (d) creating a conducive environment for the use of ICT; and (e) capacity-building in information infrastructure and content development. In this regard, the United Nations plays, and should continue to play, a unique and leading role.